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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/591,296	08/31/2006	Akio Enomoto	129280	9195
27049 7590 12/14/2010 OLIFF & BERRIDGE, PLC P.O. BOX 320850 ALEXANDRIA, VA 22320-4850				
EXAMINER				
RIVERA, JOSHEL				
ART UNIT		PAPER NUMBER		
1746				
NOTIFICATION DATE		DELIVERY MODE		
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

OfficeAction27049@oliff.com  
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# Office Action Summary

**Application No.**

10/591,296

**Applicant(s)**

ENOMOTO ET AL.

**Examiner**

JOSHUA RIVERA

**Art Unit**

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 September 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 4-9 and 11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 4-9 and 11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-840)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1, 4, 5, 7 – 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukuta et al (US Patent 6,811,737) in view of Onodera et al (Japanese Patent 09-085481) and Yamamura (Japanese Patent 2002-126421).

4. With regards to claim 1, Fukuta teaches a device where the image of a honeycomb body is picked up by a camera and the image is processed by an image

processing method to detect the position of all the cells at the end surface, then a sheet is adhered to the end surface of the of the honeycomb, which intrinsically this needs to be done with a tape bonder, and finally a laser is used to pierce the sheet (column 3 lines 37 – 56). Since the laser of Fukuta is used to pierce the tape that covers the honeycomb structure in a pattern (column 3 lines 48 – 56), the laser is capable of cutting the tape in the outer periphery.

5. It would have been obvious to one of ordinary skills in the art at the time of the invention to use the laser to cut the tape along the outer periphery of the end surface. The rationale to do so would have been that since the laser is capable of cutting the tape one would program a pattern that would include both piercing holes in the tape and cut the tape at the outer periphery. This would save money on equipment since there wouldn't be a need to have a laser beam station plus a cutting station.

6. Fukuta fails to explicitly disclose a moving type or tilt type mirror capable of reflecting the end surface of the honeycomb structural body onto the same axis as the laser oscillation.

7. Onodera teaches of a laser machining head that contains an image pick up unit (camera) and a movable mirror that reflects the image of the surface of the work to the camera and is fixed at the optical axis of the laser beam (Abstract).

8. It would have been obvious to one of ordinary skills in the art at the time of the invention to use Onodera's laser head in an apparatus that performs Fukuta's method. The rationale to do so would have been that, as stated by Onodera, this configuration reduces space and the energy loss by the laser (Abstract).

9. Fukuta and Onodera fail to explicitly disclose using a moving means capable of gripping and moving the honeycomb structural body and a winding element for winding a residual portion of the tape that is created after the tape is cut by the laser oscillator.
10. Yamamura teaches a device for stripping adhesive sheet from honeycomb filters (Abstract) where the apparatus comprises a mover (Figure 3a items 22 and 27) capable of gripping and moving the honeycomb structure (paragraph 62) and a winding element for winding residual portion of the tape (Figure 3a item 24).
11. It would have been obvious to one of ordinary skills in the art at the time of the invention to have used Yamamura's device in Fukuta and Onodera's apparatus. The rationale being that, as stated by Yamamura, it provides a method of stripping an adhesive sheet stuck to an end face of a honeycomb filter rapidly and secure without damaging the end face of the filter (Abstract).
12. With regards to claim 4, the teachings of Fukuta, Onodera and Yamamura are presented above. Additionally Yamamura illustrates the process being a continuous process (Figure 3a). It would have been obvious to one of ordinary skills in the art at the time of the invention to have used Yamamura's device in Fukuta and Onodera's apparatus. The rationale being that, as stated by Yamamura, it provides a method of stripping an adhesive sheet stuck to an end face of a honeycomb filter rapidly and secure without damaging the end face of the filter (Abstract). Also claim 4 contains an optional statement which describes that the invention is able to do the bonding process continuously, hence is not a requirement for the apparatus to do this. Specifically the term "can be" is viewed as ability and not that the action is actually performed.

13. With regards to claim 5, the teachings of Fukuta, Onodera and Yamamura are presented above. Additionally it can be seen in Figure 2 of Onodera that the angle of view of the laser (item 9) with respect to the surface of a mirror (item 59) is the same as the angle of view of the image pick-up unit (item 33) with the surface of a second mirror (item 61). It would have been obvious to one of ordinary skills in the art at the time of the invention to use Onodera's laser head in an apparatus that performs Fukuta's method. The rationale to do so would have been that, as stated by Onodera, this configuration reduces space and the energy loss by the laser (Abstract).

14. With regards to claim 7, the teachings of Fukuta, Onodera and Yamamura are presented above. Additionally, Onodera explicitly discloses that the laser used is a YAG laser (paragraph 16). It would have been obvious to one of ordinary skills in the art at the time of the invention to use Onodera's laser head in an apparatus that performs Fukuta's method. The rationale to do so would have been that, as stated by Onodera, this configuration reduces space and the energy loss by the laser (Abstract).

15. With regards to claim 8, the teachings of Fukuta, Onodera and Yamamura are presented above. Additionally Onodera explicitly discloses that the camera is a CCD camera (Abstract). It would have been obvious to one of ordinary skills in the art at the time of the invention to use Onodera's laser head in an apparatus that performs Fukuta's method. The rationale to do so would have been that, as stated by Onodera, this configuration reduces space and the energy loss by the laser (Abstract).

16. With regards to claim 9, the teachings of Fukuta, Onodera and Yamamura are presented above. Fukuta and Onodera fail to explicitly disclose that the tape bonder bonds a tape wound in a roll state onto the end surface of the honeycomb structure.

17. Yamamura teaches the use of an apparatus for applying a length of tape, film or web to the end face of a honeycomb structure where the tape is in a wound state (Figure 3a item 23).

18. It would have been obvious to one of ordinary skills in the art at the time of the invention to use Yamamura's tape bonding means to bond a wound up tape in Fukuta and Onodera's apparatus. The rationale to do so would have been that one of ordinary skills in the art would appreciate that by using a web of tape production would increase since the bonding process would be continuous.

19. With regards to claim 11, the teachings of Fukuta, Onodera and Yamamura are presented above. Fukuta explicitly states that the laser is used to pierce the tape in order to create holes at predetermined positions (column 3 lines 48 – 56).

20. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fukuta et al (US Patent 6,811,737) in view of Onodera et al (Japanese Patent 09-085481) and Yamamura (Japanese Patent 2002-126421) as applied to claims 1, 4, 5, 7 – 9 and 11 above, and further in view of Kanehara et al (Japanese Patent 01-233083).

21. With regards to claim 6, the teachings of Fukuta, Onodera and Yamamura are presented above. Fukuta, Onodera and Yamamura fail to explicitly disclose using a

correction means for correcting the distortion in the laser and segmenting the image obtained from the image pick up unit.

22. Kanehara teaches using a position correcting device for laser beam machining (Title of the patent) that receives an image from the work surface and displays it segmented in a monitor (Abstract, Figure 1 item 15 being the monitor and it can be seen that the image in the monitor is being segmented by the crossing lines 19).

23. It would have been obvious to one of ordinary skills in the art at the time of the invention to use Kanehara's correction device in Fukuta and Onodera's apparatus. The rationale to do so would have been that, as stated by Kanehara, this device is capable of correcting with high accuracy the dislocation between the laser and the machining line (Abstract).

### ***Response to Arguments***

24. Applicant's arguments with respect to claims 1, 4 - 9 and 11 have been considered but are moot in view of the new ground(s) of rejection.

25. Based on Applicant's amendment of claim 5 the rejection under 35 USC 112 first and second paragraph have been withdrawn.



***Conclusion***

26. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOSHEL RIVERA whose telephone number is (571) 270-7655. The examiner can normally be reached on Monday - Thursday 7:30am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Katarzyna Wyrozebski can be reached on (571) 272-1127. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. R./  
Examiner, Art Unit 1746

/KAT WYROZEBSKI/  
Supervisory Patent Examiner, Art Unit 1746